

May 12, 1999

Mr. Walt Pettit  
Executive Director  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812-0100

Dear Mr. Pettit:

On November 3, 1998, EPA partially approved and partially disapproved California's 1998 §303(d) list. Specifically, EPA approved the State's decisions to list 472 waters and associated pollutants and set priority rankings for these waters. EPA disapproved the State's decisions not to list 37 waterbodies and not to list additional pollutants for 12 waters already listed by the State for other pollutants. EPA further identified these additional waterbodies and pollutants with appropriate priority rankings for inclusion on the 1998 §303(d) list.

EPA provided public notice and solicited public comment on its identification of additional waters and pollutants for inclusion on California's list. The comment period closed December 3, 1998. EPA has carefully reviewed the written comments received from the State and other commenters. Pursuant to the requirements of federal regulations at 40 CFR 130.7, I am hereby transmitting to you the final 1998 §303(d) list for California which includes additional waters and additional pollutants for several waters already listed by the State, in addition to the 472 waters listed by the State. The additional waters and pollutants included on the final list are listed in Enclosure 1 to this letter. A detailed responsiveness summary explaining public comments received and EPA's responses is also enclosed (Enclosure 2).

With three exceptions, the additional waters and pollutants added to the list are identical to those identified for listing by EPA on November 3, 1998. The first difference is that in place of the term "dioxin-like compounds" used in EPA's November 3rd list to summarize the specific dioxin, furan, and PCB compounds, the final list uses more specific pollutant categories "dioxins," "furans," and "dioxin-like PCBs." This change was made because several commenters believed the term "dioxin-like compounds" was confusing. The use of the more specific summary categories is intended to identify the pollutants at issue more precisely. Second, the dioxin compound OCDD was inadvertently omitted from the list of specific compounds identified for listing on November 3, 1998, and is included in today's final listing decision. Third, furans are added to the pollutants for which Stockton Deep Water Channel is being listed because the health risk assessment on which this listing is based identified dioxins, furans, and PCBs as responsible for the water quality impairment.

EPA received 36 comment letters which included over 200 individual comments. Most of the comments focused on the listing of San Francisco Bay for dioxins, furans, and dioxin-like PCBs. Other public comments addressed individual waterbody listings or expressed concern about EPA's decision to add any additional waters to the list. We concluded that none of the comments warrants modifying the list of additional waters and pollutants identified by EPA, except for the modifications discussed above. I would like to clarify several aspects of the decision to list additional waters and pollutants which were of concern to commenters. The responsiveness summary provides more detailed responses to individual comments.

## **San Francisco Bay**

EPA reviewed the entire listing record, and found that available information supports the conclusion that the Bay is water quality-limited due to dioxins, furans, DDT, dieldrin, and chlordane and required to be listed by the Clean Water Act and EPA regulations. EPA's analysis was described in the November 3, 1998 Staff Report. Fourteen commenters supported the listing decisions, while 14 commenters opposed these decisions. Several aspects of EPA's analysis were addressed by commenters and are discussed below.

Existing, Readily Available Information: EPA regulations at 40 CFR 130.7 require that States evaluate all existing and readily available information in developing their §303(d) lists, and that they provide to EPA a rationale for any decision to not use existing and readily available information. EPA has found that when the State decided not to list San Francisco Bay for dioxins, furans, DDT, dieldrin, and chlordane, it did not consider several information sources, did not provide a reasonable rationale for not considering these sources, and did not adequately justify its conclusions that other information sources in the record did not support the listing decisions.

For example, the 1997 EPA assessment of health risks to San Francisco Bay anglers concluded that angler cancer risks were elevated due to likely exposures to these chemicals through consumption of fish from San Francisco Bay. EPA concluded that this risk assessment provides credible information to support the listing decisions because it was developed using methods consistent with EPA's risk assessment guidelines and was based on the best information available to EPA and its contractors at the time the risk assessment was developed in 1997. This information was existing and readily available when the State developed its list. However, the State submittal does not indicate that it considered this information, nor does it provide a rationale for not using it as required by federal regulations (40 CFR 130.7(b)). Therefore, EPA analyzed this information, and for the reasons discussed in the Staff Report, concludes that it supports listing San Francisco Bay for these pollutants.

The State also did not provide an adequate analysis of available fish tissue data to support its conclusions concerning the existing interim fish consumption advisory for San Francisco Bay (OEHHA, 1994). The State concluded that this advisory did not provide credible evidence that the Bay is water quality limited due to dioxins, furans, DDT, dieldrin, and chlordane in Bay fish tissue. However, the State did not provide a detailed rationale supporting this conclusion. As part of its review of the State's §303(d) list submittal, EPA evaluated the fish tissue data used by the State to develop its fish consumption advisory in 1994. EPA's review focused on dioxins, furans, and dioxin-like PCBs, concluding that these pollutants were present at levels of concern with respect to health risk from fish consumption.

For these reasons, and as described more fully in the EPA Staff Report, we find that the State's conclusion that dioxins, furans, dieldrin, chlordane, and DDT should not be included on the §303(d) list was not supported by a complete analysis of the record before the State at the time of its decision.

Applicable Water Quality Standards: Based primarily on the existence of a fish consumption advisory, EPA concluded that the COMM beneficial use ("uses of water for commercial or recreational collection of fish ... including ... uses involving organisms intended for human consumption") is not being attained due to fish contamination by pollutants listed in the advisory (dioxins, furans, DDT, dieldrin, chlordane, and DDT, along with mercury and PCBs already listed by the State). EPA further concluded that the narrative bioaccumulation objective ("controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in ... aquatic life") is not being met due to these pollutants. In the Staff Report explaining the basis for EPA's November 3, 1998 listing decision, EPA stated that "narrative standards which prohibit the discharge of toxic pollutants in amounts which adversely affect beneficial uses are not being met." Specifically,

EPA was evaluating whether the narrative bioaccumulation objective was being met. We determined that it was not being met based on the fish consumption advisory, the 1997 EPA assessment of health risk to San Francisco Bay anglers, and EPA's September 24, 1998 reevaluation of the 1994 fish tissue data.

National "Background" Levels of Dioxins and Furans: The issue of how dioxin and furan levels in Bay fish compares with levels found at other monitoring sites in the country warrants further discussion in response to comments received. Several commenters asserted that dioxin and furan levels in Bay fish were below levels measured at other allegedly uncontaminated sites around the country (referred to by commenters as "national background levels"). On the other hand, one commenter submitted recent fish tissue data for two California reservoirs which indicated that dioxin/furan levels at a California reservoir with no known local discharge sources may be much lower than levels found in San Francisco Bay or cited as uncontaminated "background" levels by other commenters.

EPA understands that there are national policy issues with respect to health risks associated with dioxins and furans and the appropriate response to this problem. EPA is addressing these issues in several forums including the Persistent and Bioaccumulative Toxic Pollutants (PBT) Initiative and National Dioxin Reassessment. Meanwhile, the listing decision for California must be made based on information concerning attainment of water quality standards for California waters. As discussed in the November 3, 1998 Staff Report, comparisons with "national background levels" are not relevant to the issue of whether an individual waterbody is water quality limited. EPA's decision to consider health risks to consumers of large amounts of Bay fish as part of the listing analysis is also consistent with national EPA policies to address environmental impacts on high-end exposed and sensitive subpopulations (e.g., people who consume large amounts of fish).

Basis for Priority Rankings and Effect on State Listing of PCBs: In its 1998 listing submission, the State listed PCBs for San Francisco Bay as a medium priority. In its listing decisions of November 3, 1998, EPA approved the medium priority for PCBs but proposed a high priority ranking for a category of pollutants which includes 12 dioxin-like PCBs. Some commenters were confused by this decision. Today, EPA is establishing a final high priority ranking for 7 dioxins, 10 furans, and 12 dioxin-like PCBs for San Francisco Bay because the listing record indicates that these compounds are most responsible for increases in human cancer risk due to consumption of contaminated fish from the Bay. The effect of this decision is to sustain the medium priority ranking for other PCBs listed by the State. However, EPA urges the State to initiate development of TMDLs for all PCBs for San Francisco Bay as soon as is practicable.

Future TMDL Development: EPA's listing of dioxins, furans, and dioxin-like PCBs as high priority for TMDL development is not intended to result in redirection of State resources from current development of TMDLs for exotic species, mercury, or PCBs in favor of work on TMDLs for dioxins or furans. EPA strongly supports the State's emphasis on protecting the Bay ecosystem from the effects of exotic species, and on protecting public health through mitigation and cleanup of methyl mercury and PCBs. As discussed above, EPA is establishing a high priority ranking for dioxin-like PCBs, which appear responsible for most of the increased cancer risk associated with consumption of Bay fish.

We understand that development of TMDLs for dioxins, furans, and dioxin-like PCBs will require substantial effort to conduct additional monitoring, characterize sources including air sources, and identify control strategies. These TMDLs may take several years to complete. EPA is willing to work in collaboration with State agencies, local agencies, and local groups to conduct the monitoring necessary to develop TMDLs for these pollutants. EPA's decision to establish high priorities for dioxins, furans and dioxin-like PCBs is intended to focus attention on an urgent human health risk issue and help initiate needed monitoring and assessment activities. These efforts should begin now.

**Lake Merritt, Stockton Deep Water Channel, and San Francisco Bay Urban Streams**

EPA is adding Lake Merritt, Stockton Deep Water Channel, and several San Francisco Bay urban streams to the final §303(d) list based on information which the State failed to consider during the State's public participation process. As described in the EPA Staff Report, this information supports the conclusion that these waters are water quality limited. The San Francisco Bay RWQCB provided supplemental responses to comments to EPA after the State had submitted its listing package. Although the Regional Board recommended the listings of 35 San Francisco area urban streams for diazinon based on its own analysis, the State did not revise its listing submission to incorporate this change. EPA appreciates the Regional Board's assistance in reviewing these public comments, and EPA based its decision to list 35 urban streams for diazinon on the analysis provided by the Regional Board in the supplemental response to comments. The State's supplemental responses to comments did not address comments concerning Lake Merritt and Stockton Deep Water Channel.

**Stemple Creek, Estero de San Antonio, Santa Clara River Reaches 7 and 8, and Coyote Creek**

EPA is adding Stemple Creek, Estero de San Antonio, and an additional pollutant for two reaches of Santa Clara River to the final §303(d) list because available information indicated that they are water quality limited segments requiring TMDLs. The State's decisions not to list them were inconsistent with federal listing requirements identified in 40 CFR 130.7(b)(1) and (3). The State delisted Stemple Creek and Estero de San Antonio because the North Coast Regional Board had adopted TMDLs for these waters. However, the TMDLs have not been fully approved by the State and have not been submitted to EPA for approval. These waterbodies must be listed because they remain water-quality limited and TMDLs have not yet been approved or established for them. I would like to discuss with you and Lee Michlin the option of EPA establishing the Stemple Creek watershed TMDLs based on the TMDLs developed by the North Coast RWQCB.

Santa Clara River Reaches 7 and 9 were listed for chlorides by the Los Angeles Regional Board, but the State Board reversed this listing decision on the grounds that the water quality standard is currently being reviewed and may soon be revised. These reaches of Santa Clara River are being listed by EPA for chlorides because they exceed the existing applicable water quality standard. If the water quality standards are revised in the future, the State could delist these segments when new water quality standards are met.

Coyote Creek in the Los Angeles Region was listed by the Regional Board, but was inadvertently dropped from the draft list public noticed by the State Board. EPA invited comment on the Coyote Creek listing, and hereby approves the State's listing of that waterbody after considering public comments submitted to EPA.

**Conclusion**

I would like to request that the State develop and submit to EPA schedules for adopting and submitting TMDLs for each of the additional waters and pollutants included in the final 1998 §303(d) list. EPA's national policy states that States should establish TMDL development schedules not to exceed 8-13 years for each waterbody and pollutant combination on the §303(d) list. I would appreciate receiving California's TMDL development schedule for the additional waters and pollutants within 90 days.

We wish to continue our support in your efforts to develop TMDLs for the waters identified on the list. If you have questions on any of the above information, feel free to give me a call at (415) 744-1860 or call David Smith of my staff at (415) 744-2012.

Sincerely,

Alexis Strauss  
Acting Director  
Water Division

Enclosures (2)

**Enclosure 1: List of Waters and Pollutants Added to Final 1998 California Section 303(d) List**

<b>Regional Board</b>	<b>Waterbody</b>	<b>Pollutant(s)</b>	<b>Priority Ranking</b>
North Coast (1)	Stemple Creek Estero de San Antonio	nutrients	low

San Francisco (2)	<u>San Francisco Bay:</u>	Dioxins	high
		2,3,7,8-TCDD	
		1,2,3,7,8-PeCDD	
		1,2,3,4,7,8-HxCDD	
		1,2,3,6,7,8-HxCDD	
		1,2,3,7,8,9-HxCDD	
		1,2,3,4,6,7,8-HpCDD OCDD	
(portion in Region 2)	Sacramento-San Joaquin Delta	Furans	high
		2,3,7,8-TCDF	
		1,2,3,7,8-PeCDF	
		2,3,4,7,8-PeCDF	
		1,2,3,4,7,8-HxCDF	
		1,2,3,6,7,8-HxCDF	
		1,2,3,7,8,9-HxCDF	
		2',3,4,6,7,8-HxCDF	
		1,2,3,4,6,7,8-HpCDF	
		1,2,3,4,7,8,9-HpCDF OCDF	
		Dioxin-like PCBs	high
		Note: Although the State already listed these pollutants, they are included here because EPA is setting a higher priority ranking for these types of PCBs than the State set in its listing action.	
		3,4,4',5'-TCB (81)	
		3,3',3,3'-TCB (77)	
		3,3',4,4',5'-PeCB (126)	
		3,3',4,4',4,4'-HxCB (169)	
		2,3,3',4,4'-PeCB (105)	
		2,3,4,4',5'-PeCB (114)	
		2,3',4,4',5'-PeCB (118)	
		2',3,4,4',5'-PeCB (123) 2,3,3',4,4',5'-HxCB (156) 2,3,3',4,4',5'-HxCB (157) 2,3',4,4',5,5'-HxCB (167) 2,3,3',4,4',5,5'-HpCB (189)	
		DDT	
		chlordane	low
		dieldrin	low
San Francisco (2)	Lake Merritt		low
		dissolved oxygen floating material	low

San Francisco (2)	<u>San Francisco Urban Streams:</u> Mt. Diablo Creek, Pine Creek, Pinole Creek, Rodeo Creek, San Pablo Creek, Walnut Creek, Wildcat Creek, Laurel Creek, Ledgewood Creek, Suisun Slough, Arroyo Corte Madera del Presidio, Corte Madera Creek, Coyote Creek (Marin County), Gallinas Creek, Miller Creek, Novato Creek, San Antonio Creek, San Rafael Creek, San Mateo Creek, Calabazas Creek, Coyote Creek (Santa Clara County), Guadalupe River, Los Gatos Creek, Matadero Creek, Permanente Creek, San Felipe Creek, San Francisquito Ck., Saratoga Creek, Stevens Creek, Alameda Creek, Arroyo de la Laguna, Arroyo Del Valle, Arroyo Hondo, San Leandro Creek, San Lorenzo Creek	diazinon	low
Los Angeles (4)	Santa Clara River, Reaches 7 and 8	chlorides	medium
Central Valley (5)	Stockton Deep Water Channel	dioxins furans PCBs (Note: specific congeners are not listed for this water because available sources in the listing record did not provide this information.)	medium